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Baths and Bathing in Ancient Greece.[1]

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THE discussion of the bathing customs of Ancient Greece is naturally approached by way of the Minoan civilization, and as we contemplate the magnificent monuments of Knossos, our thoughts dwell upon the treasures of the powerful Minos, whom Odysseus saw in Hades, "Holding a golden wand and dealing dooms to the dead." (Odyssey, xi, 569.) From this wonderful State organization originated the famous laws of Gortyn, the most detailed code of ancient times, and perhaps also the discovery of metallurgy and linear writing. The cradle of the Minoan culture shows us, among other things in the treasures of Knossos, the famous palace with its beautiful marine paintings, its picturesque mural decorations and many other important and valuable items. This palace, which covers an area of 22,500 square metres, reveals the existence of an industrial department in which engravers, modellers, sculptors and painters executed their masterpieces during the golden age of Crete.

We are here, however, chiefly concerned with but one part of the famous palace, and we turn our attention to a special room, paved with solid Santorin earth, the cement of the present day. The room dates from the fifteenth century B.C. but contains a bath that might seem to be of modern manufacture. The paving of this bathroom, with its solid and compact cement, its arrangement for the prompt discharge of water, and the perfect system of sewers which carried off the waste

[1] At a meeting of the Section, held April 21, 1920.

household water to the main drain, afford proofs of the hygienic use of baths for cleansing the body in this early period and testify to an adequate system of domestic sanitation.

In a later epoch of civilization, the period of Mycenae, during the Trojan War (1194-1184 B.C.), Homer makes the following reference to our subject: "But Atreus' son bade the folk purify themselves and cast the washings in the sea." (Iliad, i, 313-4.) Agamemnon had in fact exhorted the people to bathe in order to disinfect themselves; and they did so by the sea-shore of historic Troy. With *sea-water* they cleansed their bodies of the pestilential dirt and then drained the infected waters into the sea. Does not modern hygiene consider the *tout à la mer* method as the most efficacious of drainage systems?

In the Iatrieia and Asclepieia, the healing temples of the ancients, the patients, on their arrival, bathed, preferably in sea-water, as is witnessed by the tablets recording the cures; as Aristophanes writes: "First we brought him down to the brine, then washed him." (Plut., 656-7.)

Sea-bathing is frequently represented in Greek art. Thus on an engraved goblet in the British Museum we see Thetis bathing on the beach. The whole scene is characteristic; a dolphin gambolling round the feet of the maid-servant who offers a sheet to the bathing heroine. At other times, bathing took place in rivers. Nausikaa, daughter of Alkinous, King of the Phaeacians, goes with her waiting-women to the river to wash her clothes and subsequently bathes herself: "When they were come to the river's lovely stream, where there were washing troughs, where water, ever full and pure, wells up in plenty to cleanse clothes however soiled . . . and when they had washed and cleansed away all the dirt . . . having washed themselves and anointed themselves with oil." (Odyssey, vi, 85-87, 93, 96.) Ulysses, after the departure of the women, took his bath in the same place and afterwards shone with beauty and grace. "But goodly Odysseus washed off him with river water the brine that covered his back and broad shoulders and wiped from his head the foam of the waste sea. But after he had washed all over and anointed himself with oil . . . shining with grace and beauty." (Odyssey, vi, 224-7, 237.)

Europa bathed in the river Anauros and Helen with her companions in the Eurotas. (Theocritus, xviii, 23.) The Greeks frequently bathed in hot springs. The poets sometimes speak of them as baths of Heracles, caused to spring for his benefit by Hephaestus or Athene. Pindar refers to the hot baths where nymphs bathed: "The hot

bathing places of the nymphs." (Ol., xii, 27.) Homer, too, praised the two springs of Skamander, one for its warm and the other for its cold water: "And they came to the two fair wells, where the two springs of eddying Skamander spurt out. The one runs warm and steam goes up from it all about, as it were smoke of fire; the other flows cold in summer as hail or snow or ice." (Iliad, xxii, 147-152.)

Thus baths played an important part in the daily life of the Ancient Greeks and their influence for strengthening the body, a matter of great importance to the ancients, became rooted in their customs. During the Homeric period they were attributed by poets to the gods themselves: "And Hebe washed him and put fine clothes upon him, and he sat by Zeus, Kronos' son, exulting in his glory." (Iliad, v, 905-6.)

The numerous utensils for bathing purposes in the ancient household afford indubitable proof of the extensive use of baths. Every well-to-do household contained a bathroom, with one or more bathing tubs, close to the entrance hall. In the Homeric period, the function of the bathing tub was served by long troughs carved out of marble or sometimes made of silver. Afterwards, when these were no longer used, the Greeks took their baths in large vessels, standing on one or more feet, named *louteres* and *louteria*. Larger marble louteres used in households and afterwards in public establishments were called *colymbethrai*, *pyeloi* and *maktrai*.[1] "There was also a bathroom with three couches. It contained three brass tubs and variegated louteres, holding about forty-five gallons, made of stone from Tauromenium" (Athenaeus, Deipnosophistae, v, 207f). This bathing establishment was in a ship built by Hiero of Syracuse. And we read of "the pyelos, that is to say the bath tub; a *pyelos* is a trench, bath, in which people wash." (Scol. in Aristoph. Equit. 1060; cp. also Hesychius s. v. *pyelos*.)

In households, bathrooms were not only used by the residents, but they were also at the disposal of every guest on his arrival. They were especially used on return from a journey or after any sort of exertion. The bath was usually taken hot for the recuperation of the body and to repose the weary limbs, as is evidently the meaning of a sentence in the Odyssey: "She made me get into a tub and washed me with water from a great cauldron, tempered to a pleasant warmth, pouring it over my head and shoulders, till she had taken the distressing weariness from my limbs. And when she had washed me and anointed me with oil—." (Odyssey, x, 361-364.)

[1] Pollux, Onomast., vii, chap. 33 (paragraph 157), and x, chap. 10 (paragraph 46).

It is likewise mentioned in the tenth book of the Iliad, that Ulysses and Diomedes, on their return from the night expedition in which they took the horses of Rhesus, first of all bathed in the sea and afterwards washed and anointed themselves in the bathing establishments: "They got into the well-polished bathing tubs and washed. And when they had washed and anointed themselves with oil they sat down to table." (Iliad, x, 576-8.)

Cold baths were considered as strengthening the body and warm baths as giving it tone and vigour. Philosophers and physicians in those ancient days praised baths as giving good health and vigour to the bathers. Baths were generally taken before supper, as shown in the last quotation. Non-bathers were branded as "dirty and filthy," e.g.: "With a short Spartan coat, grimy, filthy, unwashed." (Aristoph. Lys., 278-80.)

Homer tells us that Telemachus, accepting the hospitality in Nestor's palace, bathed and was anointed with oil, after which, he was equal to the gods in beauty and was accordingly seated near Nestor, the shepherd of the people. It is well known that the criterion of beauty among the ancients was physical health and vigour and we must agree with them as to the influence of the bath: "He came out of the bathtub, in body like the immortals, and he went and sat by Nestor, shepherd of the folk." (Odyssey, iii, 468-9.)

In the Odyssey the first mark of respect that was bestowed at the Palace of Menelaus upon Telemachus and Pisistratus, son of Nestor, on their arrival, was a bath in a beautiful bathroom. It is worthy of notice that before laying food before the guests, it was the custom for the maid-servant to pour out water for them to wash their hands, thus following the dictates of modern hygiene in avoiding infection of the food by dust or germs that may be on the hands: "But when they were satisfied with gazing thereon, they got into the polished tubs and washed. And when the hand-maids had washed and anointed them and put shirts on them and thick cloaks, they sat down beside Menelaus, Atreus' son, and a maid-servant brought water for the hands in a fair golden ewer and poured it out over a silver basin for them to wash, and set out a polished table beside them." (Odyssey iv, 47-54.)

The poet explains more clearly the connexion between the washing of hands and the partaking of meals, relating afterwards that Asphalion, the faithful servant of Menelaus, poured out water for the guests in order that they might wash their hands previous to partaking of their meals: "So he spake and Asphalion, the ready henchman of noble

Menelaus, poured water on their hands and they stretched out their hands to the cheer set by them." (Odyssey iv, 216-9.)

The water was heated in a great cauldron, as is shown by the duties of the waiting-woman of Circe who " was wont to bring the water and kindle the fire." (Odyssey, x, 358.)

From the material, marble or silver, of which the Ancient Greeks made the louter we may infer firstly, the great importance which was attributed to the vessel itself, and secondly, the care taken for the perfect cleanliness of that vessel, which is more easily cleaned when made of marble or silver than if it were of clay or some other similar material.

The widespread use of baths by the Greeks is mentioned by other ancient authors, as for example by Aristophanes, while Theophrastus describes as characteristic of impudence the man who goes to the cauldrons in the public bath and after drawing water with the bucket and pouring it over his body, despite the bathman's remonstrance, leaves the place, saying that he has taken his bath and owes nothing: " He has a trick of going to the cauldrons of the baths and dipping the ladle, in spite of the bathman's shouts, he empties it over himself and says that he has had his bath, adding 'No thanks to you.'" (Theophrast. Charact. 9; where the public use of bathing establishments is clearly shown.)

The orator Isaeus refers to the repairing of a bathing establishment: " Regarding the repair of the baths and the building he undertook Dicaiogenes will perhaps repeat what he said before." (Isaeus, Or. v. § 28.)

The Lacedaemonians also considered frequent bathing indispensable; they bathed daily in the Eurotas. Xenophon says: " When Agesilaus left the Eurotas and went home." (Xen., Hell., v. 4, 28.) And Plutarch states that Alcibiades, when in Sparta, delighted the Spartans by adopting their customs: " He enchanted them by adopting Spartan manners, so that when they saw him with a shock of hair and taking cold baths." (Plut. Alcib. 23); where cold bathing is observed to be one of the Lacedaemonians' habits.

The ancient Greeks also made use of vapour baths, the room being artificially heated from below. These sudatory baths are mentioned by Herodotus: " And the Scythians howl with pleasure at the vapour bath. This serves them instead of a water bath." (Hdt., iv, 75. See also Pollux, vii, Chap. 33, § 168.) Again Athenaeus writes: " They are also acquainted with all kinds of baths which cure pains, banishing fatigue by washing in sea-water, which is excellent for the sinews, and

relaxing muscular tension by the use of the tub" (Athen. Deipnosoph. i, 44); where he refers to baths as curing pains and as lessening the tension of the muscles and hence neutralizing fatigue. And, besides the passage cited above, he mentions hot and cold baths which the Sybarites enjoyed: "They used to make visits to the caves of the nymphs called Lusiades (nymphs of the bath) and luxuriate there. Among the Sybarites were likewise found pyeloi (tubs) in which they used to lie and take vapour baths."

In Plutarch's "Kimon," these baths are called pyriateria, "on his return they appointed him gymnasiarch and afterwards as he was anointing himself in the vapour bath . . ." (Plutarch, Kimon 1.)

Later on, the Romans called the room in bathing places which was used in the same way "Laconicum," because this kind of bath was used by the Lacedaemonians (Dio Cassius, Hist. Rom. liii, 27). So also Strabo writes: "They say that some of the people that dwell near the river Durius follow the Spartan regimen, making use of anointing chambers and vapour baths contrived with red hot stones, taking cold baths and using only one kind of food in a cleanly and frugal manner" (Strabo, Geogr. iii, § 154). Strabo refers to warm springs in Euboea which were used as therapeutic baths: "In it there are hot springs of use in the treatment of diseases, to which Cornelius Sulla, the Roman general, had recourse" (Strabo, Geogr. x, § 447); and the same author speaks of the hot springs of Nisyrus which to the present day are used for therapeutic purposes: "And Nisyrus is north of Telus . . . and has a town, also called Nisyrus, and a harbour and hot springs and a temple of Poseidon" (Strabo, Geogr. x, § 488).

If we now review the treasury of vases, goblets and cruets of the ancient Greeks, which Professor Sudhoff has investigated, we shall better understand the use of partial and total baths dating back to the earliest stages of that glorious Greek period. "Partial baths," such as for instance, foot-baths, were extensively used from Homer's time and were sometimes substituted for the total bath as being simpler. Indeed, in the Odyssey Ulysses is reported as saying that after his terrible hardships, his heart could not wish for anything, not even a foot-bath: "Neither is washing of the feet grateful to me nor shall any woman touch my foot of those, &c." (Odyssey xx, 343-4); and later on it is stated that the old wet-nurse Eurykleia poured hot and cold water in a polished basin and washed the feet of the honoured guest: "So he spoke; and the crone took the shining basin wherein she washed men's feet, pouring in much cold water and then adding hot . . . and going near she made to wash her lord." (Odyssey, xx, 386-8, 392.)

The duty of foot-washing or of giving a complete bath to the guests devolved specially on the maid-servants but, exceptionally, and as a mark of respect to her old and venerable guest, Penelope entrusted it to the favourite old wet-nurse. The vessels used were usually of copper or bronze and were called podanipteres.

An engraving of a podanipter representing the goblet of Hermes in the collection of the British Museum has been copied in the work of Sudhoff: an elegant woman uses all the strength of her well developed arms to lift up from the tripod the weighty four-handled bronze vessel. The complete nudity of the woman with her hair confined in a cap conveyed to Sudhoff the idea that a more complete bath had preceded, or that after filling up the vessel, the woman bathed not only her feet but also her body. Hence, it is probable from the design that the various vessels used for foot-washing, being of different dimensions and forms, could also be utilized for washing the rest of the body.

On other ancient vases, upon which the manners and customs of the Greeks are portrayed, there may be seen figures of naked women, sitting doubled up and holding a sponge as is seen in the Munich Collection (eleventh century B.C.). In some instances, the bather is represented as sitting under a spring fountain, the water spouting out of a beast's mouth. Other representations often show a naked woman sitting on the floor. A nurse, usually dressed, is by her, pouring water on her loose hair, as may be seen upon a goblet in Petrograd. One whole series of fine goblets shows the arrangement and forms of bath tubs. More often, the form of a marble or metal basin is represented as resting on a graceful pedestal. Elegant architectural details show a fluted pedestal of the bath tub. In the hollow of the bath flows a fountain springing from a beast's head embedded in the wall.

Generally, the heavy louteres were immovable under the wall fountain, but sometimes they were removed for use and placed under the water spring, as is shown in a picture in the Naples Museum. A woman is holding the podanipter under the head of the panther from which flows out the water upon her hands while the bath towel is lying down behind her on the floor. In the Naples Museum, there are vases representing louteres in which flows the water as it springs from the fountain. Another series of engravings suggests that the water was carried in large or small vessels and was poured in the louter. The painter Brugos painted a very dainty scene: a girl, her hair bound with a thin ribbon and her bath towel twisted round her left arm, carries in her right hand a big bucket of water to be poured into the podanipter.

A drawing in the London Collection represents another private bath-room. By the deep bath in the women's apartments, two girls are very busy. The towels hang on the wall behind each of them. Between is placed at the same height the sponge and the indispensable scent-cruet, the *aryballos*. The hair of both hangs freely in rich coils over their back. The girl on the left is washing her feet with a sponge.

Another scene painted by Automenes upon a vessel represents a man's bath at the end of the sixth century B.C. In the middle of a grove near the wrestling arena was built the temple-like bath. There was an elegant colonnade from which, at about 2 metres height, water sprang from a panther's head. After exercise, hunters sat under the spring in order to get rid of the dust, sand and perspiration, after which they stepped out into the open air to dry and anoint themselves with scented oil. One colonnade for the shower bath was the beginning of what afterwards became the very elegantly built and ornamental louteres of the Greeks and Romans. Further, as the painting testifies, they used to hang their clothes as well as the indispensable scent-cruet on the branches of a tree by the colonnade.

In the more ancient Athenian shower-baths which consisted of one colonnade only, there was no undressing room, oil cupboard or anointing room, nor was there a special servant (*balaneus, parachytes, loutrochoos*) for the bath and massage. These are met with only in the later bathing places, and it must be noticed that in this more ancient type of bath that the Greeks used is the very same form of bathing approved of at the present day as most hygienic, for the shower bath which protects the bather from infection is thus the best suited for public bathing establishments.

During the sixth and fifth centuries B.C. there were also in Athens public baths for women. Such a one is painted on a vase in the Berlin Museum. In the different sections of a closed colonnade are affixed at the same height fountains representing heads of panthers, lions or wild boars. These fountains discharge water over naked women who sit below and energetically scrub their skin and flowing hair. It seems that in this bath the floor was converted into a kind of reservoir, in which the outflow could be stopped at will. This is inferred from the fact that the four women in the painting are only knee-deep in water.

Lastly, we have the painting of a larger and more important bath to be seen on a goblet now at the Louvre. In this the painter Andokides

has represented a swimming bath—a large reservoir of running water, so vast and deep that a person could swim and dive into it. One of the women is shown swimming, the other ready to dive into the water. Two of the females wear necklaces, and three wear earrings, but all are otherwise completely naked.

Swimming was generally much in vogue with the ancient Greeks, and to the present day swimming is considered as the most efficient and healthy form of exercise, because the swimmer benefits by the pure air, the cleansing influence of the water on the skin, and the exercise. The Greeks branded with ignorance and barbarism those who could not swim and could not read and write, who had " neither swimming nor the alphabet." (Diog. vi, 56.)

The Germans excavating at Pergamos found the bathroom of a higher gymnasium. On the floor were found two vessels for washing the feet. Near the wall were arranged in a circle big louteres. In other places are fountains embedded in the wall without louteres underneath to collect the water for washing purposes. The water was poured out on the hands and body of the bather and afterwards ran about the floor.

Thus we learn, from both text and vase painting, that bathing places were the rule in the more refined private dwellings; and that at the public wrestling places, gymnasiums, there were public bathing establishments. An engraved bathing vessel has come to light on which can be read the inscription " Public "; and this vessel must have been used at such a resort as we have described.

In public baths the bather paid something for his bath; the price at the time of Lucian was 2 obols. " And do you, boy, transport to the bath my scraper and mat and towels and soap, and bring the bath money. You will find 2 obols a-ground by the chest." (Lucian, Lexiph. 2.) So that the popular prices of the public baths of modern European towns, far from being a recent innovation, are merely a reversion to the customs of the ancient Greeks. Private baths are also mentioned by various authors. Plutarch refers to a certain Democles who was going to bathe in a private bath; " He used to visit a private bath to bathe." (Plut., Demetr. Poliore. 24.) And Isaeus says that a private bath was sold for 3,000 drachmas. (Isaeus, Or. 6, § 33.)

Xenophon speaks of a private bath reserved for the exclusive use of the inmates of a house. The author informs us that though some rich people had private gymnasiums and baths of their own, the community had specially built public baths and bathing establishments, which were

more enjoyed by the mass of the people than by the privileged few. "Some of the rich have private gymnasia, bathing and dressing rooms, but the people builds for its own use many wrestling schools, dressing rooms and bathing establishments, and the populace has greater benefits from them than the rich." (Xenoph. Resp. Ath. ii, § 10.)

In later times we find the public bathing establishments were enlarged, so as to contain not only the tanks but also massage rooms, where the bathers were anointed with oil, as well as dressing rooms. In some baths the bather was first washed with hot water in order to cleanse his skin. After that, an attendant (*balaneus* or *parachytes*) poured cold water with the *arytaina* on his shoulders or head, as implied by Plato (Repub. i, 344), and in similar words by Lucian: "To drench me like a bathman" (Lucian, Demosth. Enc., 16), and as actually mentioned by Plutarch: "For example, the citizens conceived such a detestation and aversion of those who had maliciously prosecuted Socrates, considering them men who had touched the lowest depths of wickedness, that they refused to give them a light for their fire or answer their questions or share the same bath water. They made the attendants pour the water away, as if it were polluted." (Plut., de Invid., vi, § 538.)

The bathers brought with them scrapers of iron or other material, oil and bath-clothes. (Plut., Inst. Lac., 32; Lucian, Lexiph, 2.) The Greeks also used for cleansing the body different substances, usually called *rhymma*, which were provided by the bath attendant.

"If you have soap, I will provide the bath." (Aristoph., Lysist., 377.)

Bathing was a preliminary to supper during that time, when the charm of beauty was so much appreciated and enjoyed. "To bathe and then take lunch." (Lucian, Lexiph., 2.)

The Iatrieia and Asclepieia of Ancient Greece are the earliest sanatoria, and many of the cures applied in these sacred infirmaries have been recorded. The learned researches of Köhler, Girard, Koumanoudis, Kavvadias, Defrasse, Kail and Hertzog have exhumed these sacred sanatoria from the depths of the Greek soil. A colleague, Dr. Aravantinos, has studied on the spot these sacred ruins, and gives a detailed description in his work, "Asclepios and Asclepieia." First, let us visit that very ancient sanatorium, the temple of Amphiaraus, situated at Oropus between Attica and Boeotia. Here the hero Amphiaraus was swallowed up by the earth with his four-horse chariot. But he returned therefrom, by the agency of a god, commanding prophetic and therapeutical powers, and here was erected a magnificent

temple and oracle built and dedicated to him in a wonderfully picturesque spot. The excavation of this precinct has disclosed its principal parts—an altar, a temple, a colonnade, seats upon which the patients rested, a theatre and, what is more interesting to us, a bathroom with a spring. This bathroom, we learn from an inscription, was furnished with hot and cold water, and there were separate rooms for men and women. It is also known from another inscription discovered in the temple that the Athenians, as a mark of gratitude to the god who dispensed health, encircled the brow of his statue with a golden crown. The inscription may be thus rendered: "The decision of the people to dedicate the crown to the god in a sacred shrine for the sake of the health and safety of the people of Athens, their children and everything in the country."

Near the entrance of the Temple of Amphiaraus was a limpid and murmuring spring, which is still known for its healing properties. Its composition has been analysed by Professor Christomanos.

We may now visit another mysterious temple in the "Cave of Trophonius": a charming spot near a magnificent river with its banks planted all over and called Herkyna. A systematic excavation of this place has not yet been carried out. A thick veil of mystery still shrouds the hiding place of its sites. But the description of Pausanias shows that the patients were placed on arrival in a small building dedicated to "Fortune" and there underwent a daily course of hot baths, strict cleanliness and hygienic diet. The patient, before entering the mysterious cave was led by the priests to the stream where he was thoroughly washed and subsequently anointed with oil. He was afterwards taken to the two other springs, the springs of Lethe and Mneme (Forgetfulness and Memory), of both of which he drank abundantly. Throughout the famous "Iatrieia," baths and hydrotherapy were considered as most important and as the chief means of therapeutical hygiene. The patients were cleansed externally in the rivers and internally by draughts of water from the sacred springs to which they attributed a symbolic meaning, as in the cave of Trophonius.

Another temple of health was the "Asclepieion" of Athens, excavated in 1876. It is situated on the southern side of the Acropolis between the two Theatres of Dionyses and Herodes Atticus. The distant and beautiful view of the Saronic Gulf proves that the Greeks took care that these sanctuaries should enjoy an agreeable outlook. This Temple was built in the fifth century B.C., and has been described by Köhler, Girard, Koumanoudis, Aravantinos and others.

Köhler and Aravantinos consider that the slightly brackish spring which flows to this day was the sacred spring of Æsklepios. The water springs from a cave situated in the rock of the Acropolis, under the northern wall of the Temple and beyond the central part of the Asclepieion. Thus, in this Temple too existed the indispensable medicinal spring for the water cures. In this sanctuary, to which Aristophanes refers, the patients made a daily use of baths.

The celebrated Temple of Epidaurus was excavated by the Greek Archæological Society in 1886 on the initiative of Professor Castorchis and under the direction of Inspector Cavvadias. This Temple, 2,500 years old, displays wonderful elegance and is composed of magnificent buildings, richly decorated. The bath has been described by Defrasse. It belongs to a subsequent Roman epoch but is built on the foundations of a more ancient Greek one. At the south-eastern angle of the first colonnade of the Abaton, or sacred sleeping place, there was an ancient spring constantly full of water which exists to the present day, which Mr. Cavvadias thinks is the sacred well of Æsklepios. The water of this sacred well has been analysed by Professor Damverghis, as well as the water of the springs Relia and St. Anne, both of which rise in the surroundings of the Temple. The examination shows that water from these three sources has the same chemical constituents. It can be classified among the light alkaline waters, abundant draughts of which are salutary to persons afflicted with gravel, stone and stomach disorders. It is probable that in the Temple of Æsklepios in Epidaurus, the water from the well was used for therapeutic purposes. Chemical analysis shows that this water would be the most efficacious of the three as it contains a larger amount of salts. The results of the analysis are as follows:—

Solid substances contained in 1 litre of water (1,000 c.c.)	Water of Æsklepios well	Water of Relia spring	Water of St. Anne spring
Calcium bicarbonate ...	0·395	0·346	0·458
Magnesium bicarbonate ...	0·033	0·036	0·025
Sodium bicarbonate ...	0·132	0·075	0·075
Calcium chloride ...	0·037	0·039	0·004
Magnesium chloride ...	0·007	0·005	0·005
Potassium chloride ...	0·001	0·001	0·002
Sulphate of calcium ...	0·014	0·014	0·022
Iron and aluminium oxides	0·003	0·002	0·003
Pyrites	0·043	0·040	0·034
Ammonia	Traces	Traces	Traces
Phosphoric acid	,,	,,	,,
Nitric acid	,,	,,	,,
Organic substances ...	,,	,,	,,
Total of solid substances ...	gr. 0·665	0·558	0·628

Behind this well remains to this day the marble seat used by the frequenters of the Temple, near which Cavvadias discovered the well-known tablets describing the cures. These seem to prove that the well was used as a means of refreshment to the patients who could walk about. We must note that the eastern wall, near which is the well, has an opening, which probably communicated with the bath, and the bath was probably used in conjunction with the mineral water of the sacred well. In this Temple, as well as in that of Asclepios in Athens and in the more ancient Trophonian caves, there was a statue of Asclepios together with the twin statue of the goddess Hygieia. The statue of Hygieia, in addition to its religious meaning, undoubtedly shows the success of the cures and the utility of the medicinal springs.

To the Asclepieia, patients flocked in thousands from all parts of Greece to benefit from the miraculous cures. In the process of cure a very important place was occupied by the baths. Indeed, the general bath was directly looked upon as the most wholesome and purifying means used in these sanctuaries which were erected in the most picturesque spots, in immense groves, with numerous cold bubbling springs and brooks. Hippocrates concludes his work on the "Treatment of Acute Diseases" by a lecture on the bath as the most useful adjunct in these diseases, if properly taken.

Of Hippocrates, Strabo writes: "They say that Hippocrates gained a great deal of his experience in medical treatment from the lore of which this temple was a repository." (Strabo, Geogr., xiv, § 657.)

Hippocrates also speaks about private baths and remarks that all were not suitably built: "A bath would be useful to many sufferers, to be employed in some ailments continuously, in others not. Sometimes it is not advisable to employ it, because of people's failure to make proper arrangements, for only in few houses are utensils and operators adequately provided. But a sick person, who was bathed not in the properest manner, would suffer no small harm from it." (Hippocrates, Acut., 18 L. 65.)

At a much later period, the philosopher Lucian, the Voltaire of Greek antiquity, in his "Hippias, or Bath Establishment," gives a description of hot and cold baths:—

"The superstructure having the proper amount of illumination. . . . The portico is lofty, with broad steps and a gentle, not steep, incline for ease of ascent. This leads the visitor into a spacious hall, where servants and attendants can conveniently wait . . . a great ornament to a bathing establishment are handsome and well lit retiring rooms . . .

and between them a very high and very bright hall, with three tanks of cold water, lined with green marble, and two white statues of the ancient kind, one of Health and the other of Asclepios.

"He proceeds next into an oval room moderately warm and welcoming him with a pleasant heat, beyond which on the right is a very cheerful room leading from the palaestra, delightful to anoint oneself in, with doorways of Phrygian marble on both sides. Then comes the finest room of all . . . and next he enters the warm passage, incrusted with marble. The interior hall is very fine, bathed in light and clothed as it were with purple. Here also are three hot bathing-troughs, and when you have bathed you can return to the cold water quickly without passing again through the same rooms, by a pleasantly warm side room bathed in light and brightness.

"In addition, the proportion of the building and the rooms are just, and grace and charm preside over the whole. As Pindar beautifully says: 'When a work is beginning its front must be made such as to shine afar, and this can be best managed by the arrangements made for the distribution of light and brightness by means of windows.' Hippias, a truly wise man, has made his cold bathroom face northward, while those that require much heat he has exposed to south and east and west. What need have I to speak of the rooms for exercise and the wardrobes with their quick and short access to the bath, calculated for convenience and safety? . . . Hippias has admirably displayed in this work of his all the merits of a bathing establishment, utility, convenience, light, symmetry, excellent adaptation to its situation, complete safety in use, and in addition he has thoughtfully provided it with two privies, and given it a large number of exits and two clocks—one a water clock, which indicates the time by a roaring sound, the other a sun clock." (Lucian, Hippias s. Balneum, 4-8.)

Here the witty author affirms that the bath establishments of this age were comfortable, agreeable and of beautiful architecture, but they were also built in accordance with modern hygienic requirements, and the abundant light gave health and gaiety to all the departments and disinfected the privies.

The proportion of width, height and position of the building with regard to the sun as well as the presence of the statue of Hygieia, proclaimed the close relationship of the building with the strengthening of the bathers and, in general, the whole arrangement of the bath is such that it may serve as a model sanatorium even to this day.

In this short and imperfect study we have sought to show that the

twentieth century, as regards the vital question of baths, is but a copy of that brilliant epoch of the ancient Greeks. Their highly civilized age has enlightened all subsequent epochs.

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